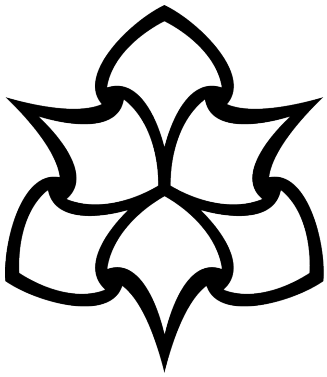

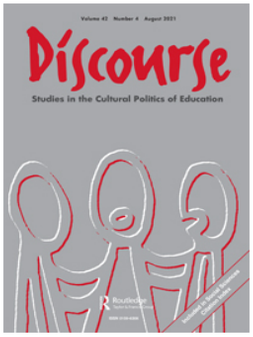

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# Teaching in the afterward: undoing order-words and affirming transversal alternatives

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**ABSTRACT**

This paper addresses the irruptive potentiality of language in rethinking pivotal concepts in pre-service and in-service teacher education. Drawing on Deleuze and Guattari's reconceptualization of language, we undertake a radical undoing of dominant concepts of pedagogy, curriculum, and assessment as 'order-words' that variously segment, delimit, and potentialize lines of subjectification and signification in professional learning settings. We argue for a speculative and affirmative engagement with the complex trajectories of teacher education in light of this post qualitative turn, focusing on how Deleuzoguattarian concepts decouple the act of teaching from the 'teacher' as personal subject, and resituate the event of teaching within assemblages of felt transitions and vital forces. Working through vignettes that affirm transversal alternatives for exploring how teaching 'thinks' through events, we conclude by considering ways that teaching approaches the immanent outside of language, or what Deleuze simply referred to as 'a life'.

**KEYWORDS**

Language; Deleuze; Deleuze and Guattari; pedagogy; curriculum; assessment

## Introduction

This paper explores the role of language in rethinking the act of teaching in the 'afterward' of the 'posts, post-posts and neo-posts' of educational research (Lather, 2013, p. 634). We question what teaching might become following the posthumanist displacement of the humanist subject, the post-structural deconstruction of language, and the arrival of post qualitative inquiry as an immanentist approach to educational research (St Pierre, 2017, 2019). Drawing on reconceptualizations of language in the works of Deleuze (1969/1990, 1968/2014) and Deleuze and Guattari (1991/1994, 1987/2004), we develop practices of undoing 'order-words' that continue to dominate teacher education, while affirming transversal alternatives for exploring how teaching 'thinks'. Transversality aims to account for collective movements of subjectivity along vectors of experience that are transversal (or diagonal) to the vertical and horizontal dimensions of an institutional assemblage (Guattari, 1995). By applying a logic of transversality to rethink the role of language in the 'afterward' of teacher education, this paper works to re-imagine concepts

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of *pedagogy*, *curriculum*, and *assessment* as 'order-words' that variously segment, delimit, and potentialize lines of subjectification and signification in professional learning settings.

Our engagement with the transversal language of teaching builds on a diverse genealogy of Deleuzoguattarian studies in education, including work focusing on rhizoanalysis (Massumi, 2013), multi-literacies (Massumi, 2009), language outside of representation (MacLure, 2013), and voices without subjects (McKnight, Rousell, Charteris, Thomas, & Burke, 2013; 2016). In taking a transversal approach to language in education, this paper aims to reroute the language of teaching from the personal order of the subject into the impersonal order of events. In this, we hope to make some tentative steps toward shifting the conceptual ecology through which teaching thinks, and can be thought, as practice. However, as others have (e.g. Braidotti, 2013; Ulmer, 2017), we too recognize the fraught tension in decoupling our own enactment of subjectivity in this work. In acknowledging our (perhaps inevitable) failings in this respect, we reference some of the pervasive issues of inescapable latent humanistic tendencies towards the end of the paper.

In what follows, we situate the transversal conceptual processes at work within Deleuze and Guattari's tools for rethinking language, including the concepts of 'major and minor language', 'order-words and passwords', and 'regimes of signs'. This conceptual work informs a series of vignettes drawn from our own teacher education practices that demonstrate experimental shifts in the 'order-words' of pedagogy, curriculum, and assessment. These sections narrate shifts from a personal pedagogy to a pedagogy of the concept; from a State curriculum to a curriculum as sense-event; and from an assessment of outcomes toward assessment as cartography. Each of these shifts contributes to a refashioning of language in and through alternative concepts and practices of teaching. In the concluding section of the paper, we ask how language, in its function of agencement, opens onto its own outside: the limitless, infinite, virtual, immanent, asignifiying, impersonal, formless plane that Deleuze (2001) terms 'a life'.

## The return to language

The recent turn to posthumanist theories in educational research has emphasized the agency of materials, bodies, things, and technologies in teaching and learning assemblages (Snaza & Weaver, 2014). This has often been characterized as a paradigmatic shift away from previous movements that sustained critical focus on the agency of language, text, knowledge and discourse in constructing social formations and identities (Snaza et al., 2015; Taylor & Bayley, 2019), including movements associated with post-structuralism and critical theory, pedagogy, and curriculum studies. This shift has also been described more broadly as an 'ontological turn' in education research (Rousell, 2021a; St Pierre, Jackson, & Mazzei, 2016), through which epistemological questions of human knowledge and agency are being displaced by ontological questions of more-than-human relationality and becoming. New concepts are being invented (or re-appropriated from the histories of philosophy and science) to account for the materiality of discourse and the discursivity of matter, with portmanteau terms such as 'material-discursive' (Barad, 2007) and 'material-semiotic' (Haraway, 1997) effectively blurring normative distinctions between language, thinking, sociality, politics, ethics, materiality, embodiment, cultural production, and the natural world. This has called for a near-total

revaluation of what matters in/as research in education and the social sciences more broadly, including the call for the development of alternative (or 'new') empiricisms that refuse any a priori split between matter and meaning, knower and known (Cotterill, 2009; de Freitas, 2016; Rousell, 2021a; St Pierre, 2019).

Working within and in response to these new turns in social and educational theory, St Pierre (2016a, 2019) has proposed post qualitative inquiry as an approach that abandons the concepts and methods of conventional qualitative research. She argues that qualitative research methodologies assume an essentialist image of the liberal humanist subject that is incommensurable with 'post' theories. Through a variety of orientations ranging from outright 'anti-humanism' to a broad spectrum of 'posthumanist' sensibilities, 'post' theories radically deconstruct the normative image of a bounded, intentional, and rational subject. In decentering the humanist image of the subject, traditional research methodologies in education no longer hold their onto-epistemological water. No one is left to answer interview questions when voice can no longer be indexed to a deliberate, intentional human subject (McKnight et al., 2013). A similar argument can also be made for the broader critical project of education, and indeed, the act of teaching which presumes its subject as 'receiver' and 'constructer' of knowledge. What does teaching become without a subject who teaches, or indeed, a subject to teach?

While the essentialized subject of liberal humanism may have been deconstructed, and even in some quarters, dispensed with since the emergence of post-structuralism in the late 1960s, there are lingering questions around the role and status of language in 'post' fields of education studies. Even in the more recent turns to new materialist and posthumanist ontologies, there has been a tendency to side-step questions of language, sense, and subjectivity in the privileging of bodies and materiality (Swarbrick, 2017). Despite the close alignment between post qualitative inquiry and new materialist theory, St Pierre's (2019) recent work has suggested that certain preoccupations with matter and things may be too hasty, leaving unfinished business with post-structuralism and the associated deconstruction of language that prefigured the new materialist and posthumanist turns. Grosz (2017) also raises significant questions about the limits of new materialisms in accounting for the 'incorporeal' dimensions of sense and subjectivity within an immanentist ontology. She argues that privileging matter/bodies over language/discourse cannot leave the hard problems of sense and subjectivity behind.

## Rethinking language with Deleuze and Guattari

While Deleuze and Guattari's work is often evoked within recent 'materialist' turns, their philosophical legacy includes a diverse and pragmatic set of tools for rethinking language. Considered through Deleuze and Guattari's (1987/2004) pragmatics of transversality, language no longer functions as a stable 'mediating' factor between a thinking subject and an externalized social world. Rather, language is encountered on the immanent surface of experience where intensive, extensive, and virtual forces meet, as a transversal movement (or 'agencement') that shifts dynamically, in continuous variation, through encounters with the world.

In the geophilosophical scheme developed in *A Thousand Plateaus*, language performs a function that segments, delimits, and potentializes lines of subjectification and signification within an immanent field of life. Subjects and meanings are co-produced in the

continuous passage between content and expression, resulting in ongoing stratifications of territories and codes. However, production of subjectification and signification are by no means the only functions of language within Deleuze and Guattari's philosophy. As Deleuze (1969/1990) makes clear in the *Logic of Sense*, 'it is language as well which transcends the limits and restores them to an infinite equivalence of an unlimited becoming' (p. 2). Language acts as a delineator, but in doing so must also participate in a virtuality outside of itself that speaks to, for, and with unlimited potentialities that precondition actual states of affairs. In *A Thousand Plateaus*, this 'unlimited' function of language is expressed through the figuration of the 'line of flight', which detaches itself from lines of segmentation to pursue a trajectory of deterritorialization that, if left unchecked, will ultimately overturn, destroying the entire corporeal-semiotic scheme. Confronting this paradox depends on understanding the 'toolbox' of concepts that Deleuze and Guattari (1987/2004) offer, and exploring how these concepts approach the virtual limits-points of language when addressing particular problems. As Mazzei (2011) explains:

> As a limit-concept, the virtual cannot be thought without paradox – and without working to make the paradox conceptually productive … To make that limit-experience productive, the thinking must then turn back before it breaks apart like a spaceship entering a black hole. (pp. 18–19)

In this respect, the limit-concept of the virtual paradoxically constitutes the 'immanent outside' of language, as well as the immanent ground through which any articulation of language is expressed. Approaching Deleuze and Guattari's paradox of language in this paper, we select and explain specific concepts for rethinking language and its potentialities in teaching, including the concepts of 'order-words', 'pass-words', 'major and minor languages', and 'regimes of signs'. We detail the mechanisms through which these concepts offer alternative understandings about language, relating these specifically to teaching and learning in the latter parts of the paper. In this, we hope to take the foundational concepts of education to the brink or 'black hole' of virtuality, while being careful to turn back before the concepts break apart completely.

## Major and minor languages

Much of Deleuze and Guattari's work exploring the possibilities of language firstly attunes to its rhizomatic heterogeneity, rejecting dominant structuralist views (such as those found in socio-linguistics) that suggest a unidirectional system of words through which humans acquire knowledge in logical stages of 'progress'. Structuralism restricts language to the informational and pre-set: language is representational and conveys meaning, which can be 'unveiled' by those who look deeply and know enough. Ontologically, structuralism supposes an arborescent (Deleuze & Guattari, 1987/2004) route to being in the world, in which language takes primacy to provide the branches for a trajectory of upwards movement. This 'upwardness' acts as the momentum of 'betterment', serving as a transcendent goal to be ultimately reached. Deleuze and Guattari reject these ideas outright (1987/2004). Instead, they posit the paradox of language, explaining that '*you will never find a homogeneous system that is not still or already affected by a regulated, continuous, immanent process of variation*' (p. 114, original italics).

The distinction between major and minor language offers a differential that allows us to view this variable nature in two of its 'use' operations: the boundary sett(l)er and the limitless variable. However, we must first understand that these are not two separate forms of language – they are 'two possible treatments of the same language' (Deleuze & Guattari, 1987/2004, p. 114). This is an important distinction as it gives way to the appreciation of the different functions of language on equal footing, and impedes the temptation to create a false *a-priori* divide of good and bad/right and wrong language functions. Major and minor language do not exist in a dichotomous system where such divides are prefigured. Instead, major and minor are both necessary to and dependent on each other as symbiotic components within an open system of language.

The major function of language sets its limits through command: order-words. It is the apparatus of the State, and an axis of State-power. From its construction of strata and molar lines, the 'power of constants' exists and is enforced through the encircling functions of language and representation (Deleuze & Guattari, 1987/2004). The minor operates through variation and is the weapon of the nomad who breaks up the encirclements of the settler. It allows movement between the major's boundaries by way of molecular (or 'intensive') lines. Here is where the distinction plays out – there *must* be constants and boundaries to allow for movement away, just as there *must* be variables and movement to set against a structure of delineation. Major language creates structures through order-words and their encircling power of instruction. Minor language moves away from these structures through *pass-words* and their intensive malleability. Pass-words act 'beneath order-words [working as] words that pass, words that are components of passage, whereas order-words mark stoppages or organized, stratified compositions' (Deleuze & Guattari, 1987/2004, p. 122).

## *Regimes of signs*

In tandem to these conceptions of language's micropolitical and sociological usages, Deleuze and Guattari (1987/2004, p. 155) develop the 'regime of signs' as a concept that describes the assemblages of enunciation as the 'functions of existence' to which language responds. A regime of signs is not the result of an underlying linguistic structure, nor even an emergent structure that accumulates over time, but rather the repetition and continuous variations of pure functions, a pragmatics of encounters that literally 'produce' the incorporeal conditions for sense, language, and subjectivity to emerge. '*What makes a proposition or even a single word a "statement"* pertains to implicit presuppositions that cannot be made explicit, that mobilize pragmatic variables proper to enunciation (incorporeal transformation)' (p. 155, italics in original).

Each regime of signs governs what can become sensible, sayable, and intelligible, conditioning the problems to which language responds pragmatically in particular contexts and situations. The regime pertains to the function of expression as it oscillates continuously in relation to a machinic assemblage of bodies, as physical states of corporeal affairs and lived events. The domain of each regime of signs is that of the intensive and the incorporeal, expressing an implicate order of events which never fully becomes explicable. A regime of signs does not begin with a subject who makes sense of signs, but rather produces the subject according to a particular regime of signs as an assemblage of enunciation occurring under particular pragmatic conditions. In this sense, there is no chance of

'escaping' from regimes of signs, because as soon as we abandon one regime another has already taken its place. The question becomes: *what are the conditions under which a particular regime of signs comes to expression?* If the conditions change, so does the regime. This has significant implications for teachers, to the extent that a regime of signs not only conditions language learning, but also how one learns to think and behave like a subject, to perceive and make meaning of the world. We learn to be human and/or animal, we learn to say 'I' and/or 'we', always through one regime of signs or another.

In our reading of Deleuze and Guattari's philosophy of language, we find it important to stress that the regime of signs cannot be escaped or avoided, even in sleep, unconsciousness, or death. As MacLure (2021) explains:

> Signs may be material or incorporeal, as well as linguistic, and are important not for what they signify or communicate, but for their potential to enter into relations with other signs, and thereby rouse the mind to new connections. The interpretation of signs requires skills of deciphering and divination. (p. 2)

One regime of signs or another will always be in play as the expressive component of virtual events and corporeal affairs. However, we are not suggesting that this simply involves 'picking and choosing' which regime a teacher might 'prefer' to think and teach through. Regimes only change when conditions change, and conditions are never only just physical. In this respect, rather than critiquing the regime of signs that orders teacher education from within, we are interested in stuttering the order-words that hold this regime together against the entropic pull of a limitless chaos, or 'immanent outside' (Mazzei, 2018). One of the aspects of Deleuze and Guattari's work on language that we want to emphasize is the radical elasticity and capacity for variation within regimes of signs that would otherwise be reductive and oppressive of life. Every major language is already shot through with the potential variations of the minor. Our task as teacher educators, in this respect, is to perform minor conversions of the order-words that structure education as a regime of signs through which teaching thinks.

## From order-words to pass-words

In the following subsections, we explore how the teaching-based order-words of 'pedagogy', 'curriculum', and 'assessment' can perform differently when they are refashioned as minor pass-words. We make the case that in order to interrogate how teaching *thinks*, we must engage with a conceptual transitioning of its dominant language within its own pragmatic contexts. We have selected order-words that have privileged and authoritative positions in teaching and learning (and teacher learning), and we use this vantage point as leverage to pry open and rupture their dominance, allowing transversal movements to take place. Through the movements of major and minor language by way of order-words and pass-words, we explore how 'a single thing or word undoubtedly has this twofold nature: it is necessary to extract one from the other – to transform the compositions of order into components of passage' (Deleuze & Guattari, 1987/2004, p. 122).

### *Passage 1: from personal pedagogy to a pedagogy of the concept*

The term *pedagogy* appears frequently in educational writing (Murphy, 2008). Its meaning and status however varies widely, dependent on (amongst other factors) geographical

location (Alexander, 2008) and sector (Murphy, 2008). Here we focus on pedagogy as 'order-word' in teacher education, where the concept is ubiquitous, owing to the extraordinary range of work it does in establishing a teacher's practice (Masny, 2013) and sense of professional identity (Danielewicz, 2001). In many models of contemporary teacher education, pedagogy is the central concept around which normative ideas of teaching in the classroom are organized. These normative conceptions of pedagogy may refer equally to the 'art', 'science', and 'philosophy' of teaching, and essentially operate as a hinge between theory and practice in the enactment of teachers' everyday work (Murphy, 2008). Despite the complexity of factors augmenting this pedagogical hinge, in teacher education, pedagogy is increasingly conceived as a person-centered project of teacher learning and development. The student teacher is charged with making sense of the theory and the practice of teaching, in order to cultivate and develop a successful pedagogical approach. This is particularly the case in England, where pedagogy has been largely ignored by policy makers, but remains the mainstay of teacher education and professional development (Alexander, 2008; Simon, 1981).

Despite the seeming promise of egalitarian freedom in the 'personalization' of pedagogy, we argue that pedagogy continues to operate as an order-word that reinforces the major language of teaching. This is because the process of personalized teacher learning and development remains inextricably embedded within the normative standards and reflexive narrativizations of the neo-liberal subject (Mazzei, 2018). This standard of the subject demands an endless project of inward-facing self-reflection: an echo-chamber that resounds with the words 'what can I do better, how do I improve?'. Within this narrative, the teacher appears to grow and develop; over time becoming more productive, more skilled, more knowledgeable. As a result however, the *concept* of pedagogy is essentially frozen, calcified, fossilized. Pedagogy remains an order-word around which an infinite regress of self-reflection is held in place: a self reflecting on itself, on itself, on itself, ad infinitum. In Deleuze and Guattari's (1987/2004) terms, pedagogy becomes an order-word which pulls a particular regime of signs into a holding pattern, forming a machinic regime of subjectification and signification which determines (and demands) the life-long personal project of professional learning and development.

What happens if we recalibrate pedagogy away from the 'I' of the teacher, to focus instead on a *pedagogy of concepts,* functioning without recourse to a bounded, personal subject? Deleuze and Guattari discuss this 'pedagogy of the concept' at length in *What is Philosophy?* (1991/1994). Concepts are described as incorporeal movements of thought that 'survey' a particular territory or 'neighborhood' on the plane of immanence. Concepts are seen to move across this plane and enter into transformative reciprocal relations, while retaining their own particular consistencies as concepts. This relational movement and transformation of concepts is considered pedagogical in the sense that it produces new conditions for thought. Pedagogy shifts the conditions for new, as yet unthought, events to take shape, when a concept begins to function as 'the contour, the configuration, the constellation of an event to come' (Deleuze & Guattari, 1991/1994, pp. 32–33).

Deleuze and Guattari argue that concepts do not adhere to rules of linear space and time in classical physics, nor to the subject-object divide assumed by dualistic ontologies. Concepts can 'travel' across space and time, simultaneously present in the pull of the past and the lure of the future, and can emerge anywhere in the world regardless of proximity or distance. A concept cannot be 'contained' within a unitary subject, and instead

operates in preindividual (presubjective, prehuman, presocial) relations of movement. Concepts are impersonal, always in circulation but never 'owned'. In this respect, concepts are pass-words that open up passages of thought which cannot be claimed or contained under the rubric of an individual identity, or the subject/object division. Concepts are indexed to the implicate order of *events,* rather than the explicate order of states of affairs (Deleuze, 1969/1990).

In the following vignette, we explore an example of how this 'pedagogy of the concept' might operate in a pre-service teacher education program. In doing so, we are not advocating for the abandonment of developing a personal pedagogy, particularly since the neo-liberal education system demands this personal development as prerequisite to entering and succeeding in the teaching profession. Rather, we are suggesting the pedagogy of the concept as a molecular line, to allow movement at the boundaries of major language. As pass-word, pedagogy has the potential to unsettle the calcification of subjectivity around the narrative of the individual, self-improving 'teaching subject', introducing a different kind of movement and capacity for thinking in/as teaching.[1]

## *Reflection as rhizome*

In her practice as a teacher educator, co-author Michaela has often rerouted pedagogy (and its association as an order-word with/to reflection as self-improvement) through the concept of the rhizome (Deleuze & Guattari, 1987/2004). In the context drawn on for this example, as part of their education program, pre-service teachers keep a learning journal – a compendium of written accounts, documenting troubling or intriguing events from teaching practicum. After practicum, the pre-service teachers, guided by their course tutor, use the journals as bases for a range of critically reflective professional learning and development activities. As an entry point to rethinking these activities, Michaela took up Deleuze and Guattari's (1987/2004) atypical conceptualization of text. This concept of text, as Alvermann describes (2000), is predicated upon the 'avoidance of any orientation toward a culmination or ending point' (p. 117), focusing instead on the rhizomatics of how 'texts function outside themselves' (p. 117) by plugging into other experiences and events. How might the concept of the rhizome allow for *movement*; freeing the process of reflection from the confines of professional self-improvement? If the pre-service teachers were encouraged to engage with the texts (their journals) as agents acting outside of themselves, as multiplicities of connections between people, places, things and other texts, as existing only 'through the outside and on the outside' (Deleuze & Guattari, 1987/2004, p. 4), how would the reflection for professional learning be different? How would it work? What would it make possible? (St Pierre, 2004).

In the series of practical experiments that followed, the concept of the rhizome moved through various reflective activities. As a process, rhizomatic reflection constituted reading *through* texts (plural) rather than the reading of a (journal) text (singular). The pre-service teachers began to read their learning journals alongside a range of other texts, for example, films, novels, poems and children's literature. Thus, they were encouraged to read the texts askew (St Pierre, 2013), focusing less on what the texts meant (hermeneutics) or how the subject – their teaching 'self' – was revealed (phenomenology) and instead asking: what do these texts *do*? The pre-service teachers then responded to a series of questions with the aim of provoking rhizomatic readings, for example 'How do the texts function?' 'What does the journal writing 'do' to the other texts I am

reading and vice versa? 'What connections are possible?' It was hoped that this alternative mode of reflection would encourage the pre-service teachers 'to decenter key linkages and find new ones, not by combining old ones in new ways, but by remaining open to the proliferation of ruptures and discontinuities that in turn create other linkages' (Alvermann, 2000, p. 118).

Reflection as rhizome requires a shift or transformation in pedagogical expectation and emphasis, not least because it forces a rethink of the 'tripartite division' (Deleuze & Guattari, 1987/2004, p. 25) which separates 'human knowers at the top; a passive, static reality at the bottom; and language as a transparent medium between the two capable of producing meaning' (St Pierre, 2016b, p. 1082). The pre-service teachers' spatiotemporal (post-practicum) distance from the realities of the classroom no longer needed to proffer the answer to the question 'how will you improve your practice?' They were not obliged to present themselves as knowing subjects, making meaning from experience neatly packaged in language. They could stop searching for what their journal writing revealed about them, the children, the classroom, teaching, learning and so on. In other words, they were free to abandon their pseudo-personalized narratives of pedagogical advancement. This is an important move. As Clough (2013) notes, 'order-words "flow" around places of learning like the routing of electricity in plasterboard walls' (p. 95). In the context of teacher education, they circulate and proliferate at high volume (*plan, teach, curriculum, subject, differentiate, behavior management, assessment, high expectations* … ); instructing a subject; presupposing the act of pedagogy as an order-word to subsume all the others. As a result, in its traditional form, reflection too often reproduces the given order. In this vignette, the concept of rhizome produces reflection differently; rhizomatically. Reflection becomes the experience of how journal writing functions *pedagogically* in its own right, and in what ways this pedagogy connects disparate concepts and events through an assemblage of other (seemingly non-relatable) encounters with texts.

### *Passage 2: from state curriculum to curriculum as sense-event*

While pedagogy orders the act of the teacher, curriculum orders the particular constellations of concepts, contents, and knowledge practices for those who teach. Conventionally, curriculum refers to the conceptual, epistemic, and encyclopedic content of teaching including any material plans, guides, designs, and resources that teachers use to organize and deliver this content. In this respect, curriculum is an order-word that is increasingly subject to neo-liberal agendas around individual teacher performance optimization. Both the British and Australian authors' contexts have seen significant political efforts to nationalize and standardize curriculum content at governmental level. While pedagogy has demonstrably been relegated to a 'personal project' for teachers, the concept of curriculum has been forcibly overtaken by the State.

Our concern is not with a critique of particular aspects or elements of these Nationalized curriculum projects, but rather with how the *concept* of curriculum has been rendered inert in teacher education. There is a significant genealogy of critical curriculum studies originating in North America from the mid-twentieth century (see, for instance, Aoki, 1993; 2005; Apple, 1979; Greene, 1993; Pinar, 1978; 2012), with cognate developments of scholarship globally (Pinar, 2013; Priestley & Biesta, 2013). Yet recent

posthumanist scholarship has questioned the rhetoric of 'unveiling' that lies at the heart of these critical curriculum projects, which tend to situate the teacher as a critical 'revealer' of social injustices, facts, and moral truths. Snaza et al. (2015) connect the very idea of curriculum to an Enlightenment project of humanization that severs subjectivity from its ecological relations with a more-than-human world, instead cultivating the privilege of the unitary individual to 'think for *him*self'. Curriculum is theorized as a governmental mechanism for producing a particular (e.g. White, male, educated, competitive, successful) 'standard' of the human individual, to which all other variations of the 'human' are meant to aspire. From this posthumanist perspective, the 'progressive' State curriculum aspirations of liberal humanism are complicit with the predatory accumulation of financial capital, institutional racism and sexism, and the total economization and datafication of educational life (Mazzei, 2018). Moreover, progressive concepts of State curriculum have been rendered incapable of responding to the posthuman conditions of the present (Bignall & Braidotti, 2018), with the onset of climate change and the Anthropocene signaling the death or 'end … of curriculum' as a universal, humanizing project (Gaztambide-Fernández, 2015, p. 248).

Responding to these affirmative critiques of curriculum in the posthumanities, Manen (2017) question what curriculum might look like in the 'afterward' (Lather, 2013) of governmentality and the 'invisible hand' of the neo-liberal control society (Deleuze, 1992). Through a series of collective writing and artmaking experiments, they propose a range of 'transversal curricula' that cut holes in the 'tight fabric that forms our essentialized, ever compliant teacher identities in neoliberalism' (p. 640). The experimental curriculum practices shared by Manen (2017) open up transversal spaces for our own process of grappling with the problem of curriculum in teacher education. Thinking specifically with Deleuze's radical interventions in language and the 'pedagogy of the concept' described earlier, we can see the possibility of shifting away from the 'curriculum as content' toward the 'curriculum as sense-event'. Deleuze (1969/1990) theorizes the sense-event as an incorporeal condition for the emergence of thought and the actualization of bodies. Sense-events are shaped by concepts on the plane of immanence, contributing a virtual 'sense' or orientation to events through which lived encounters in the world unfold (Grosz, 2017). Sense-events are, therefore, distinct from and yet intimately connected with *sensations* as the corporeal perceptions and feelings experienced by bodies. The emergence of perception *in* sensation is thus an ongoing project of 'making sense' of the problems that bodies encounter in the actual world. Taking tentative steps toward theorizing curriculum as sense-event, we share an example where curriculum inheres to the diffractive texture of immediate sensations and encounters with a violent storm.

## *The storm-curriculum*

In revising a Masters course for in-service STEM education teachers, co-author David reshaped the curriculum around concepts and approaches from feminist science and technology studies (Barad, 2007; Haraway, 1997) and the rhizomatic thinking of Deleuze and Guattari (1987/2004). The course was re-oriented to address significant problems in the field of STEM education, including the onset of climate change and the Anthropocene, the neo-liberal commodification of STEM education, racialized and gendered exclusions from STEM, and the datafication of teachers' labor and performativity.

Activities and discussions focused on how critical feminist perspectives on STEM could be developed in tandem with the students' diverse backgrounds as trained physicists, chemists, mathematicians, and computer scientists. This approach to curriculum was 'diffractive', in the sense originally proposed by Haraway (1992) to map how interference patterns between different knowledge practices become sensible. In this respect, the course asked students to bring scientific concepts and knowledge into rhizomatic relationship with feminist theory and posthumanist imaginaries of STEM education.

In one of the final tutorials for this course, the students explored techniques of 'diffractive reading' using the university campus as a site for experimental fieldwork. Focusing on a three-story, glass fronted foyer space of their university building, the students spent around one hour sensing the diffractive play of differential forces and thresholds within the architectural environment. This included attending to the interaction of physical elements (such as light, shadow, volume, transparency, acoustics, distances, lines, angles, curves) with social and discursive elements (such as gestures, cues, expressions, interests, conversations, behaviors). As it happened, on this particular day there was a powerful storm moving through the city. Winds over 100 kilometers per hour were blowing horizontal sheets of rain against the glass fronted building. The violence of this storm was shifting the whole texture and feeling of the environment into a higher register of intensity and force. With the sound of wind and rain filling the space and roaring in our ears, we witnessed local people trying to take shelter under the overhang of the building's roof. Some came in through the revolving doors, shaking off the rain and finding a warm, dry space to wait out the storm. But we also noticed several people getting blown up against the glass edifice of the building, struggling to make their way to the doors, and then hesitating before staggering off into the storm to find refuge elsewhere. Apparently, these people didn't feel authorized or welcome to pass the threshold into the university building, even though the revolving door was physically open.

What emerges from this example is a sense of the storm-becoming-curriculum by establishing the material-discursive conditions for alternative learning experiences to occur. In Deleuze and Guattari's (1987/2004) terms, the storm is both the 'content' and the 'expression' of a sense-event that produces a particular assemblage of thinking-feeling-doing within a field of emergent experience. In becoming-curriculum, the storm does not *determine* the learning that occurs so much as *condition* it, through encounters with particular problems.

In the case of the storm-curriculum, one of the problems encountered was why some people felt resistant to crossing the threshold into the University. Physically and visibly, the door was open, but an invisible barrier made it too hard to pass through. This opens another facet of the curriculum as sense-event, in the way that an invisible curriculum can make a certain threshold feel just too hard to bear, such as the invisible curriculum that governs people's authority to enter and engage with the University. Masny and Cole (2009) discuss the everyday 'weight' of thresholds that racialized and neurodiverse bodies undergo in order to 'pass' into the University. 'Thresholds cost a lot; every time you cross another threshold that isn't made for you, your body trembles with the ache of that crossing' (p. 6). Manning calls on those who pass easily through thresholds to question the privilege of such easy thresholding, which hinges on the unearned privilege of never having to think about 'passing' as normative. In the case of the storm-curriculum,

the confluence of elemental and social forces brought the uneasiness of thresholding to the foreground of the event, opening up a problematic field for encountering the curricular barriers and passages that regulate access to educational experiences. This curriculum could never have been planned or determined in advance. It required the sense-event of the storm to activate its contours, and the collective attunement of our class to diffractively 'read' its implications for thresholding.

### *Passage 3: from assessment of outcomes to assessment as cartography*

The question of what it takes to 'pass' raised by the storm-curriculum also applies to the concept of assessment, which typically functions as an adjudication of who gets to pass a particular course according to predetermined criteria. In the traditional milieu of teaching and learning, the word 'assessment' describes any process used to 'establish what students know and are able to do' (Looney, Cumming, van Der Kleij, & Harris, 2018, p. 442). This simple definition includes a broad range of measures, from structured techniques such as graded examinations, essays and portfolios, to more informal methods, including ad hoc observation and in-class questioning (Manning & Kuipers, 2013). Literature and research on assessment is profuse, and has spawned a litany of typologies designed to account for, organize thinking around, and develop assessment purposes, approaches and practices. These typologies fall into two main camps; assessment for learning (AfL), describing activities intended to support ongoing progression in learning, and assessment of learning (AoL), describing assessments that measure learning outcomes for the purposes of public reporting and accountability, certification, and selection (Barber & Hill, 2014). Torrance (2007) adds a third designation to the lexicon, using 'assessment as learning' to describe a state of affairs where assessment processes and practices dominate the learning experience through and through.

The addition of this third assessment type is significant and speaks to the ubiquity of assessment within formal education settings. Whilst AfL occupies the pedagogical high ground, associated as it is with 'foster[ing] meaningful, authentic [learner] engagement' and 'collaborative learning environments' (Sadler & Reimann, 2018, p. 132), it also has limited political currency (Boud & Falchikov, 2007). The same cannot be said of end-point assessments, or AoL. Neoliberal systems of governance, which dominate the modern political landscape, reify and sustain a synonymy of education and the so-called knowledge economy. End-point assessments, along with their associated qualifications mean schools and education systems can be monitored and ranked, allowing governments to trade in education as a commodity (Colebrook, 2016), in advanced capitalism's competitive markets. Education has become an international enterprise of human-resource development (Torrance, 2017).

For the neoliberal regime, the 'optimization' of living matter is a prudent investment as governments work to produce learner subjects as means of economic advantage and advancement. As a result, curriculum, pedagogy and assessment all too often collapse into one another (Torrance, 2017). Global and national systems of measurement, monitoring and accountability rely on assessment procedures rapidly progressed by computational datafication (Lingard, 2011), and as such, assessment has come to order the educative experience. Here we see clearly the disciplinary function of assessment as order-word, as systems of assessment create order and command obedience within a

regime of signs (MacLure, 2016). Deleuze and Guattari (1987/2004) claim that 'the order-word is a death sentence' (p. 118) to those that receive the order, essentially killing off unrealized potentialities, 'arrest[ing] the movements of becoming' (MacLure, 2016, p. 175). Albeit using different vocabularies, many contemporary scholars make this claim of and/or for assessment (Boud & Falchikov, 2007; Cole, 2017; Harrison et al., 2020; Torrance, 2017); that assessment of outcomes is a thousand tiny deaths for education.

The distinctively humanist ideological and policy rhetoric of neoliberal education is that 'everyone can succeed' (Torrance, 2017, p. 89). With antecedents in the liberal philosophies of the seventeenth and eighteenth century, this apparent altruism rests on a bilateral and supposedly mutually beneficial contract between State and individual. The State provides the conditions and infrastructure needed (in this instance, systems of assessment, monitoring and accountability) so that willing and hardworking, or responsibilized individuals can prosper (Robertson, 2008) (and ultimately feedback revenue to the state). As Torrance (2017) neatly summarizes, 'assessment and examinations provid [e] the quintessential vehicle for individualizing and responsibilizing success and failure in relation to achievement' (p. 83). Thus, assessment epitomizes, depends on and reinforces the humanistic ideal of Man; the liberal individual, defined 'in terms of autonomy and self-determination' (Braidotti, 2013, p. 23). This mélange of ideology, politics, policy and practice, is how assessment as order-word functions; producing a teacher/learner subject through a regime of signs that thrives on individual profit and attainment. Not principally linguistic but cultural, the regime of assessment pertains both to assemblages of content (infrastructures of assessment) and expression (subjects of enunciation) that change and condition what it means to become a teacher and a learner through the accumulation of 'educational capital'. And while assessment in higher education may be increasingly orientated toward collaboration and multi-modality, progressive changes in assessment design often do little to sway the pervasive climate of neo-liberal performativity held in place by the order-word of assessment.

## *Cartographies of/as assessment*

Assessment is arguably the most difficult of the three educational order-words that we are attempting to convert into pass-words. Innovation in assessment is risky and fraught with tension (Boud & Falchikov, 2007). We recognize the need to negotiate and resolve a myriad of often conflicting demands: responding appropriately to student needs and expectations, operationalizing institutional imperatives and (whilst) maintaining and enacting our own praxiological ambitions (Lock, Kim, Koh, & Wilcox, 2018). The untethering of assessment from externally determined criteria and outcomes is particularly hard, requiring careful experimentation that maintains a sensitivity to the affective investments, values, and orientations of the students we teach. In this vignette, we discuss minor changes in the assessment design of a core course called *Mapping the Territory* within a Masters program for in-service. Each of us has taught or been involved with this course in a number of different ways. As the initial course that students take on entry to the program, *Mapping the Territory* is explicitly designed to induce disruptions and re-imaginings of teaching practice as students begin to engage with a range of critical theories and research perspectives. By inviting students to map the shifting 'conceptual territories' of their teaching practice through disruptive encounters with theoretical concepts, this

course provides us with a working example for reconceptualizing assessment through/as cartography.

In *A Thousand Plateaus*, Deleuze and Guattari (1987/2004) describe cartography as processual and performative, continuously forming new connections and opening onto multiple entryways and exit points. They contrast this function of cartography with that of the 'tracing', which always comes back to 'an alleged "competence"'(p. 14). In attempting to rethink assessment as cartography, we are far less interested in the products, outcomes, or competencies that assessment, as order-word, claims to measure. Rather, we are interested in the improvised and often anarchic multiplicity of processes that unfold as students come to map their emerging engagements with theoretical concepts (c.f. Rousell, 2021b). The assessment process for *Mapping the Territory* provides a dynamic example of this approach. Students are invited to design and create visual mappings of concepts related or relatable to their field of study (for example, inclusive education, educational leadership, or STEM education). These maps can include photographs, images, diagrams, icons, arrows, drawings, or any other visual elements. They can also include text, but this is not a requirement and there is no expectation that the maps are 'explained' through textual representations of meaning. This assessment approach is designed to emphasize the ability of theory to 'get in the way' (MacLure, 2010), the use of concepts to 'create orientations for thinking' (Cole, 2017, p. 654), and practices of cartography as a generative process of conceptual rupture and suture (Deleuze & Guattari, 1987/2004).

The conceptual maps that students produce in the course vary in style and focus. Some reproduce familiar or recognizable maps, for example, aerial views of roads and walkways, or public transport networks, presenting and connecting their concepts as intersections, geographical areas or fault lines. Other students assemble collages of images, artefacts and words. Featured concepts have included activism, surveillance, climate change, the Anthropocene, datafication, biosociality, performativity, diffraction, justice, agency, behavior, and identity. We ask students to resist the temptation to select and apply concepts for *extensive* purposes; that is, as labels or categories that try to answer questions posed externally to a problem. Rather, we encourage students to engage with concepts for *intensive* purposes, 'where the concept operates itself as a method drawn from the problem at hand' (Cole, 2017, p. 654). In this way, students are encouraged to pose educational problems using concepts as methods for orientating their thinking differently through an assessment as cartography.

What if we consider the process that students go through (encountering concepts, drawing up maps) as both a cartography and assessment? The physical map, image, or diagram that the students eventually submit would, in this sense, be only a 'tracing' of this intensive process (c.f. Rousell, 2019). By engaging cartography as an open-ended process rather than the production of a product, assessment becomes a process of *valuing how students/teachers get caught up in conceptual problems*, and how this process generates new ways through which teaching can think. Assessment then becomes a question of how new constellations of intensive value are produced in and through the entire cartographic process. This production of value cannot be measured, quantified, or even really 'judged' according to any universal or transcendent set of criteria (Mazzei, 2018). 'Thinking intensively would allow learning to be something different with every event of education' (Cole, 2017, p. 655). When assessment is re-

orientated toward intensive value, it can no longer be indexed to a marking rubric or the score that a student eventually receives in order to 'pass' or 'fail' according to a predetermined model of 'learning'. This is because we are no longer assessing 'competencies' or 'outcomes'. Instead, we are assessing the intensive value of events through which teaching and learning processes unfold. Arguably, this would require the invention of a new 'minor language' of assessment, a language that values the intensive movements and incorporeal transformations through which teaching comes to think. We conceptualize this cartography as (anti)assessment; it primarily functions to engage students with/in 'affect, force and movement' rather than 'representation, signification, and disciplinarity' (Dolphijn & van der Tuin, 2012, p. 112).

## Conclusion: how teaching thinks outside of language (a life)

This paper explores some transversal potentialities of 'doing' teaching when rethinking the language of education in the 'afterward' of post qualitative inquiry. Through the examples offered above, we have attempted to show how concepts and language continue to *matter* in teacher education, both actually and virtually, physically and incorporeally. In considering how the order-words of 'pedagogy', 'curriculum', and 'assessment' might function outside of themselves, we inevitably gesture towards the beyond of language to speak to the unfinished business between sense and sensation – between language and materiality – in the work that comes *after* the demise of the liberal humanist subject. By refusing to privilege either the discursive or material elements involved in perpetuating these order-words, and their ubiquity in teacher education, we are attempting to push against the limits of language to refashion them into components of intensive passage. 'Pedagogy' becomes a question of how concepts move across the surfaces of events; 'curriculum' becomes an encounter with sense-events that produce a new compound of sensation and conceptual thought; and 'assessment' becomes a cartography that plays across the intensive value of a teaching and learning process. These conceptual inversions not only allow for a rethinking of commonplace order-words in teacher education, but also enable a different vantage point from which to explore the vicissitudes of how *teaching thinks* and *thinking teaches* outside of language. However, even in this endeavor, we must acknowledge some inescapable contradictions of latent humanism pervasive within all acts (Soper, 1986; cited in Braidotti, 2013). Though this paper makes serious attempts to disrupt the subjectivities associated with the language of education, contradictions inherent between the posthuman and human in thinking and teaching lead to inevitable inconsistencies that we cannot (and perhaps should not try to) outmaneuver completely (e.g. Peterson, 2011; cited in Braidotti, 2013). As Braidotti suggests that 'in some ways, the work of critical thought is supported by intrinsic humanist discursive values' (2013, p. 29), we recognize our inability to decenter ourselves as stable subjects in authoring this work. Reconciling the difficulties in this task, we accept the impossibility of total escape and appreciate that 'thinking is a nomadic activity, which takes place in the transitions between potentially contradictory positions' (Braidotti, 2006, p. 199).

By attending to passages between the machinic assemblage of bodies and the collective subject of enunciation, we place significance on the event of teaching as an enfolded assemblage of extensive, intensive, and virtual forces that constitute an educational life.

Deleuze and Guattari (1991/1994) write of a life of events that is impersonal, incorporeal, 'unlivable: a pure *reserve*' (p. 156). By encountering education in the paradoxical folds of this 'unlivable' life of pure events, we are attempting to foreground the virtual and intensive dimensions of teaching as a material-discursive process, without losing sight of the regime of signs through which teaching comes to expression. This ultimately involves the production of a minor grammar and vocabulary that is sensitive to how education is lived through movement, a collective project that is necessarily speculative, social, and open-ended in nature. In constructing this minor language of education word for word, and concept by concept, we suggest that the habits of educational language and materiality might gradually shift through collective attunements to the shared potentials of teaching and learning events.

## Note

1. Mazzei (2018) suggests the cultivation of practices of 'creative duplicity' which maintain normative standards of personalization in order to survive, but never stop looking for ways to open 'escape hatches' from under the crushing weight of neo-liberal capitalism.

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